

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 7 • THERMAL & MOISTURE PROTECTION

07 90 00 • SEALANTS

SECTION INCLUDES

Sealants

RELATED SECTIONS

04 20 00 Unit Masonry
07 11 00 Waterproofing & Dampproofing
07 50 00 Membrane Roofing
08 10 00 Doors and Frames
08 50 00 Windows
09 90 00 Painting



Waterproofing, Dampproofing, and Caulking is a stipulated filed sub-bid category under M.G.L. Chapter 149, §44F. While these types of work are typically specified in different sections, if the cumulative estimated value of the work in this section exceeds \$20,000 and the projects total cost is over \$100,000, it triggers the filed sub-bid requirement., then specify it all in a single section to avoid confusion

When specified as a separate filed sub-bid section, all specified sealant work will be performed by the sub-bidder. If the designers intent is for the window installer or other trades to install sealants, then the necessary sealants, installation, and related materials should only be specified in the specification sections for those particular trades.

TECHNICAL STANDARDS

MATERIALS

“Sealant”: is used for exterior applications. Standard used is ASTM C 920 *Standard Specifications for Elastomeric Joint Compounds*.

“Caulking”: is used for interior applications where there is less movement, and refers to latex sealing compounds. Standard used is ASTM C 834 *Standard specification for Latex Sealing Compounds*

For interior applications typically use latex, or acrylic-emulsion sealants. Exceptions are joints in vertical surfaces in bathrooms, showers, and kitchens where one-part mildew resistant silicone sealants should be used.

Generally, for exterior vertical locations DHCD recommends that silicone sealants be used rather than urethanes because of their excellent performance characteristics, and resistance to UV degradation. Except in instances where material compatibility is an issue.

For horizontal surfaces in concrete use a multi-part pourable urethane sealant.

Oil base caulking is not acceptable.

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Refer to manufacturer for recommendations for specific materials and products.

Backer rods should be used whenever possible.

SEALANTS, CON'T

DESIGN

Proper joint design:

- ☐ The designer should check the relative expansion/contraction of abutting materials in order to properly size sealant joints.
- ☐ All sealants require surface preparation, and primers may be required per the manufacturer for certain surfaces. In selection of sealants, care should be taken that there is compatibility with adjacent materials.
- ☐ Sealants should adhere to only two surfaces: Use backer rods and bond breakers to facilitate this.
Depth to width ratio should not exceed 1 to 2.

Sealant Location:

Care should be taken to account for all necessary sealants in the contract documents. The following locations, which often require the use of sealant, are frequently neglected and should be clearly documented in Contract documents:

- ☐ The top of a wall base at irregular walls and rough substrates like masonry
- ☐ The perimeter of an interior door, sidelight, and transom frames
- ☐ At the joint between acoustical ceiling wall angles and irregular walls
- ☐ At countertops
- ☐ At inside (concave) corners in ceramic tile wall finishes

INSTALLATION

The use of preconstruction field tests or mock ups to verify sealant adhesion to joint substrates is advisable, and should be called out in the specifications.

Post installation testing is also recommended